

Amendment  
USSN 09/550,596

solution provided by the present invention. With no teaching of either the problem or the solution, it is difficult to see how the claimed invention could have been obvious to one of skill in the art. Further, even if the problem were recognized, as the examiner begins to suggest, it is respectfully submitted that there is no basis for concluding that the claimed solution would have been obvious.

More particularly, the goal of the invention is to allow operation over a large range of temperature (see, e.g., lines 4-20 of page 4 of the specification), with the advantage of avoiding cooling equipment and temperature regulation and consequently providing a low cost device. The examiner very broadly asserts that it would have been obvious “to obtain a preferred working **range for the wavelength** at ambient temperature,” but this is not what the invention is about. Rather, it is about obtaining acceptable operation over a **range of temperatures**.

Further, while the examiner notes that it would have been obvious to provide the exit facet with a negligible reflectivity coefficient compared to the Bragg grating, this would not lead to the claimed invention. Applicant has not claimed simply providing a Bragg reflection coefficient low relative to the exit facet reflection coefficient. Applicant has instead claimed an arrangement whereby the maximum reflectivity wavelength of the grating is at least 10 nm below the wavelength at which the laser cavity gain is at a maximum. This is simply not suggested anywhere other than in the present application.

Doussiere et al '711 does not discuss at all the subject of the conduct of gain curves of lasers with quantum well active layers, and does not even hint that this characteristic could be

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exploited for solving the problem to which the present invention is addressed (which problem Doussiere et al '711 does not even acknowledge).

As to Ventrudo et al '481 relied on in the rejection of claim 20, this reference is similarly deficient in not acknowledging either the problem or the solution to which the present invention is directed. Ventrudo does note that "the wavelength of the grating reflectivity nominally lies within 10 nm of the wavelength of the diode laser, "so at least Ventrudo is more relevant than Doussiere et al '711 is saying something about the reflectivity wavelength of the grating. But it is important to note at least the following. First, the lasing wavelength of the diode laser is **not** the same thing as the maximum gain wavelength. It may be near, but it is not the same thing, so Ventrudo does not teach having the Bragg reflectivity within 10 nm of the maximum gain wavelength of the laser. Second, the teaching of Ventrudo is to have the reflectivity wavelength no more than 10 nm from the laser wavelength, i.e., it is the teaching of Ventrudo to **minimize** this difference, whereas in the present invention seeks to make sure that the difference between the reflectivity wavelength and the maximum gain wavelength is **at least** 10 nm. Accordingly, Ventrudo (1) does not specifically disclose (anticipate) what is claimed here and (2) from an obviousness standpoint would actually teach away from what is claimed.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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Date: January 30, 2003